

Claims

What is claimed is:

1. A system for reading a self-authenticating document having machine-readable data including critical document data, digital signature data and a public key certificate, the system comprising:
 - personal identification means for receiving a personal identification number
5 (PIN) from a presenter of said self-authenticating document;
 - image scanning and processing means for reading said self-authenticating document and retrieving said machine-readable data from said self-authenticating document, and for assembling an authenticatable data string from said critical document data and said received PIN;
 - 10 parsing means for parsing said machine readable data to obtain said digital signature data and said public key certificate; and,
 - validating means for certifying said public key certificate to obtain an authentic public key, and for applying said authentic public key to said digital signature data for validating said authenticatable data string, wherein said self-
15 authenticating document is authenticated if said authenticatable data string is validated.
2. The system of claim 1, wherein said machine-readable critical document data includes data stored in a first and second format on said self-authenticating
20 document, and wherein said image scanning and processing means comprises:
 - a first machine-readable data reading system for reading said critical document data stored in a first format from said self-authenticating document; and,
 - a second machine-readable data reading system for reading said critical document data stored in a second format from said self-authenticating document;
 - 25 and,
3. The system of claim 2, wherein said first machine-readable data reading system reading system is a MICR reader said first format is magnetic ink character recognition (MICR) code.

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4. The system of claim 3, wherein said second machine-readable data reading system reading system is a bar code reader and said second format is bar code.
5. The system of claim 1, wherein said machine-readable critical document data is stored in a bar code format on said self-authenticating document, and wherein said image scanning and processing means includes a bar code reading system for reading said bar code format to retrieve said critical document data.
6. The system of claim 1, wherein said validating means comprises:
a certification validation subsystem for validating said public key certificate with a third party public key and for obtaining said authentic public key; and,
a digital signature validation subsystem for validating said digital signature data with said authentic public key.
7. A system for reading a self-authenticating document having machine-readable data including critical document data, digital signature data and a public key certificate, the system comprising:
image scanning and processing means for reading said self-authenticating document and retrieving said machine-readable data from said self-authenticating document, and for assembling an authenticatable data string from said critical document data;
parsing means for parsing said machine readable data to obtain said digital signature data and said public key certificate; and,
validating means for certifying said public key certificate to obtain an authentic public key, and for applying said authentic public key to said digital signature data for validating said authenticatable data string, wherein said self-authenticating document is authenticated if said authenticatable data string is validated.
8. The system of claim 7, wherein said machine-readable critical document data includes data stored in a first and second format on said self-authenticating document, and wherein said image scanning and processing means comprises:
a first machine-readable data reading system for reading said critical document data stored in a first format from said self-authenticating document; and,

a second machine-readable data reading system for reading said critical document data stored in a second format from said self-authenticating document; and,

5 9. The system of claim 8, wherein said first machine-readable data reading system reading system is a MICR reader said first format is magnetic ink character recognition (MICR) code.

10 10. The system of claim 8, wherein said second machine-readable data reading system reading system is a bar code reader and said second format is bar code.

15 11. The system of claim 7, wherein said machine-readable critical document data is stored in a bar code format on said self-authenticating document, and wherein said image scanning and processing means includes a bar code reading system for reading said bar code format to retrieve said critical document data.

20 12. The system of claim 7, wherein said validating means comprises:
a certification validation subsystem for validating said public key certificate with a third party public key and for obtaining said authentic public key; and,
a digital signature validation subsystem for validating said digital signature data with said authentic public key.

25 13. A system for reading a self-authenticating document, said self-authenticating document having machine-readable data including first critical document data stored on a magnetic ink character recognition (MICR) line, and first and second digital signatures, and a public key certificate stored on a bar code line, the system comprising:

a personal identification subsystem for receiving a personal identification number (PIN) from a presenter of said self-authenticating document; and,
30 an image scanner and processor system for reading said self-authenticating document and retrieving said machine readable data from said self-authenticating document, and for assembling an authenticatable data string from said first critical document data and said received PIN, said image scanner and processor including:

a magnetic ink character recognition (MICR) reader subsystem for retrieving said first critical document data from said MICR line;

a bar code reader subsystem for retrieving said first and second digital signatures and said public key certificate stored on a bar code line;

5 a parsing subsystem for parsing said bar code to obtain said first and second digital signatures and said public key certificate; and,

a validating subsystem for certifying said public key certificate to obtain an authentic public key and for applying said authentic public key to at least said second digital signature for validating said authenticatable data string, wherein said
10 self-authenticating document is authenticated if said authenticatable data string is validated.

14. The system of claim 13, wherein said machine-readable data further includes second critical document data stored in said bar code line, wherein said
15 bar code reader subsystem further retrieves said second critical document data stored in said bar code line, and wherein said authenticatable data string assembled by said image scanner and processor subsystem includes said second critical document data.

20 15. The system of claim 13, wherein said second critical document data comprises ASCII text from said self-authenticating document.

16. The system of claim 15, wherein said ASCII text is the account name and address printed on said self-authenticating document.

25 17. The system of claim 13, wherein said validating means further applies said authentic public key to said first digital signature to validate said critical document data when no PIN is received, and wherein said self-authenticating document is authenticated if said critical document data is validated.

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